

## WHAT IS CLAIMED

1. A method for removing line-like defects from an image by providing image data in digital form, analyzing segments of the image data as groups of pixels,  
5 detecting line defects in the image by application of a line detector and adjusting the image data to correct the detected line defects within the determined limits.
2. A method for removing line-like defects from an image by providing image data in digital form, analyzing segments of the image data as groups of pixels,  
10 detecting line defects in the image by application of a local radial angular transform and adjusting the image data to correct the detected line defects within the determined limits.
3. The method of claim 1 in which the line detector detects a line according to at  
15 least one characteristic from the group comprising line lightness higher than the surroundings, line lightness lower than the surroundings, line contrast with respect to surroundings, line orientation with respect to the image borders, line edge sharpness, line width or line length.
4. The method of claim 2 in which the line detector detects a line according to at  
20 least one characteristic from the group comprising line lightness higher than the surroundings, line lightness lower than the surroundings, line contrast with respect to surroundings, line orientation with respect to the image borders, line edge sharpness, line width or line length.
- 25 5. The method of claim 1 wherein the image is a color image.
6. The method of claim 2 wherein the image is a color image.
- 30 7. The method of claim 1 wherein the image data is provided in a color space format that includes a brightness value.



automatically detecting line defects in the image, and adjusting the image data to correct the detected line defects.

5 18. The method of claim 17 wherein automatically detecting line defects in the image is effected by application of a local radial angular transform.

10 19. The method of claim 17 wherein automatically detecting defects in the image is determined by a program which analyzes for line-like patterns and their relative darkness or lightness with respect to surrounding pixels or surrounding pixel groups.

15 20. The method of claim 17 wherein automatically detecting defects in the image is determined by a program which analyzes for line-like patterns and their contrast with respect to the surroundings.

20 21. The method of claim 2 wherein an operator adjusts two contrast limits  $L_1$  and  $L_2$  to restrict what regions of the image are to be selected as a defect area.

25 22. The method of claim 2 wherein only values of a lines strength metric,  $|c_3|$ , satisfying the relationship  $L_1 \leq |c_3| \leq L_2$ , where  $0 < L_1 < L_2 \leq |c_3|_{\max}$ , are considered to represent a defect, wherein  $L_1$  defines a lower contrast limit and  $L_2$  defines an upper contrast limit.

23. The method of claim 1 wherein the operator marks a selected area of the image on which to practice the method.

24. The method of claim 2 wherein the operator marks a selected area of the image on which to practice the method.

25. The method of claim 2 wherein a threshold value to determine limits on detected line defects to be treated is applied to data from application of a local radial angular transform.

5 26. A computer containing software and hardware that enables execution of the process of claim 1.

27. A computer containing software and hardware that enables execution of the process of claim 2.

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28. A method for removing line defects from a still image by providing image data in digital form, analyzing segments of the image data as groups of pixels, detecting line defects in the image, detecting line defects in the image within a specified range of widths without manually designating the spatial location of the line defects, and adjusting the image data to correct the detected line.

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29. A method for removing line defects from a still image comprising providing image data in digital form, detecting line defects in the image of a specified brightness, as either higher or lower brightness than a predetermined value, compared to surrounding pixels without manually designating the spatial location of the line defects, and adjusting the image data to correct the detected line.

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30. A method for removing line defects from a still image by providing image data in digital form, detecting line defects in the image of a specified contrast compared to surrounding pixels without manually designating the spatial location of the line defects, and adjusting the image data to correct the detected line.

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31. A method for removing line defects from a still image by providing image data in digital form, detecting line defects in the image of a specified range of sharpness without manually designating the spatial location of the line defects, and adjusting the image data to correct the detected line.

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